

Attachment 4

MassDEP Monitoring Site Descriptions

Boston - Kenmore Square

Site Description: The Kenmore Square site provides historical data of air pollution trends in an urban location going back to 1965, and is located at the intersection of five roads. The site represents mixed commercial/residential population exposure on a middle scale. The site also has a new automated Gas Chromatograph (GC) for measuring benzene, toluene, ethyl benzene and xylene (BTEX).

Address: Kenmore Square, Boston

Lat./Lon.: 42.34894, -71.097708

MSA/CMSA: Boston CMSA, Boston Metropolitan MSA

Parameters Measured: PM_{2.5} (every 3rd day); PM₁₀ (every 3rd day); NO, NO₂, NO_x, SO₂ trace, BTEX

Year Established: 1965 for population exposure monitoring



Boston - Harrison Avenue

Site Description: The Harrison Avenue site is the NCore multi-pollutant site and a National Toxics Trends Site (NATTS) that integrates several advanced measurement systems for particles, gases, and meteorology. This site represents urban background population exposure on a neighborhood scale.

Address: 1159 Harrison Avenue, Boston

Lat./Lon.: 42.3295, -71.082619

MSA/CMSA: Boston CMSA, Boston Metropolitan MSA

Parameters Measured: PM_{2.5} (every 3rd day); PM_{2.5} (hourly); PM₁₀ (every 3rd day); O₃; CO; NO; NO₂; NO_x; NO_y; SO₂; Lead; Toxics; Carbonyls; VOCs; PAHs; Black Carbon; Meteorology

Year Established: 1998 for population exposure monitoring



Boston - North End

Site Description: The North End site represents mixed commercial/residential population exposure on a middle scale in an urban area. Monitoring originally began at this site in support of the Central Artery construction project.

Address: 150 North Street, Boston

Lat./Lon.: 42.3631, -71.0542

Parameters Measured: PM_{2.5} (daily), PM_{2.5} (hourly), Black Carbon

Year Established: 1998 as a special study in support of the Central Artery construction project



Boston - Von Hillern Street

Site Description: The Von Hillern Street site is located within 50 feet of a heavily traveled urban highway and represents near-road exposure where peak hourly NO_2 concentrations are expected to occur.

Name: Von Hillern

Address: 19 Von Hillern Street, Boston

Lat./Lon.: 42.32519, -71.0561

CMSA/MSA: Boston CMSA, Boston Metropolitan MSA

Parameters Measured: $\text{PM}_{2.5}$ (3 day); $\text{PM}_{2.5}$ (hourly), NO , NO_2 , NO_x , CO , Black Carbon, Meteorology

Year Established: 2013 for near-road NO_2 monitoring



Brockton – Buckley Playground

Site description: The Brockton Buckley site is located in a park/playground and represents a mixed commercial/residential population exposure on a neighborhood scale.

Address: 170 Clinton St., Brockton

Lat./Lon.: 42.065131, -71.12667

CMSA/MSA: Boston CMSA/Brockton MSA

Parameters Measured: PM_{2.5} (every 3rd day); PM_{2.5} (hourly); O₃

Year Established: 2013 for population exposure monitoring



Chelmsford – EPA NERL

Site Description: The Chelmsford EPA New England Regional Laboratory site is located in a commercial / residential area and represents population on an urban scale downwind of Worcester. EPA had been monitoring ozone at the site since 2005 and MassDEP took over ozone monitoring as part of its network in 2012.

Address: 11 Technology Drive, Chelmsford

Lat./Lon.: 42.626925, -71.362128

CMSA/MSA: Boston CMSA/Lowell MSA

Parameters Measured: O₃

Year Established: 2012 for population exposure monitoring



Chicopee

Site Description: The Chicopee site is located on a military base and represents population exposure on an urban scale. It is a PAMS type 2 site providing maximum precursor concentrations for the Springfield area. MassDEP conducts year-round 24-hour PAMS sampling via carbonyl and canister samples.

Address: Anderson Road, Chicopee

Lat./Lon.: 42.194444,-72.555628

CMSA/MSA: Springfield MSA

Parameters Measured: PM_{2.5} 3 day (2); NO, NO₂, NO_x, CO, O₃, Toxics, Carbonyls, VOCs, PM_{2.5} Speciation, PM_{2.5} (hourly), PAMS, Meteorology

Year Established: 1983 for population exposure monitoring



Fairhaven

Site Description: The Fairhaven site is located in a residential area adjacent to a school and represents population exposure monitoring on an urban scale. This site was established in 2013 to replace a previous Fairhaven site at a different location (the Wood School on Sconticut Road).

Address: 30 School Street, Fairhaven

Lat./Lon.: 41.645403, -70.898402

Parameters Measured: O₃, Meteorology

Year Established: 2013 for population exposure monitoring



Fall River

Site Description: The Fall River site is located in an urban area at a fire department station and represents population exposure on a neighborhood scale.

Address: 659 Globe Street, Fall River

Lat/Lon: 41.685728, -71.169764

MSA/CMSA: Providence-Pawtucket-Fall River MSA

Parameters Measured: PM_{2.5} (3 day); SO₂, O₃, PM_{2.5} (hourly)

Year Established: 1975 for population exposure monitoring



Greenfield

Site Description: The Greenfield monitoring site is located in a residential area adjacent to a school and represents population exposure on a neighborhood scale.

Address: 16 Barr Avenue, Greenfield

Lat./Lon.: 42.605832, -72.596647

CMSA/MSA: Springfield MSA

Parameters Measured: PM_{2.5} (3 day); O₃, PM_{2.5} (hourly), Black Carbon, Meteorology

Year Established: 2014 for population exposure monitoring



Haverhill

Site Description: The Haverhill monitoring site is located in a residential area adjacent to a school and represents population exposure on an urban scale.

Address: Consentino School, Washington Street, Haverhill

Lat./Lon.: 42.770867, -71.102831

CMSA/MSA: Boston CMSA, Lawrence MSA

Parameters Measured: PM_{2.5} (3 day); O₃, PM_{2.5} (hourly), Meteorology

Year Established: 1994 for population exposure monitoring



Lawrence

Site Description: The Lawrence site is located at MassDEP's Wall Experiment Station Laboratory in a mixed commercial and residential area and represents population exposure on a neighborhood scale.

Address: 37 Shattuck Street, Lawrence

Lat./Lon.: 42.698245, -71.164951

MSA/CMSA: Boston CMSA, Lawrence MSA

Parameters Measured: PM_{2.5} (3-day)

Year Established: 1999 for population exposure monitoring



Springfield

Site Description: The Springfield site is located in a commercial area and represents population on a neighborhood scale.

Address: Liberty Street, Springfield

Lat./Lon.: 42.105811,-72.597619

MSA/CMSA: Springfield MSA

Parameters Measured: PM_{2.5} (3 day); PM₁₀ (3-day), PM_{2.5} Hourly, NO, NO₂, NO_x, CO, SO₂, lead

Year Established: 1988 for population exposure monitoring



Lynn

Site Description: The Lynn site is located adjacent to a public water supply facility and represents population exposure on an urban scale. It is a PAMS Type 2 providing maximum precursor concentrations. MassDEP conducts year-round, 24-hour PAMS sampling via carbonyl and canister samples. Canister samples are also used for NATTS background.

Address: 390 Parkland Avenue, Lynn

Lat./Lon.: 42.474671,-70.971358

CMSA/MSA: Boston CMSA; Boston Metropolitan MSA

Parameters Measured: PM_{2.5} (3 day); NO, NO₂, NO_x, CO, O₃, Toxics, Carbonyls, VOCs, PM_{2.5} (hourly), PAMS, Meteorology

Year Established: 1983 for population exposure monitoring



Milton – Blue Hill

Site Description: The Milton - Blue Hill site is located on top of a hilltop next to the Blue Hill weather observatory and represents population on an urban scale. The site is a PAMS Type 1 site for Boston and an upwind background site for PM_{2.5} and maximum O₃ concentration.

Address: Blue Hill Observatory, Milton

Lat./Lon.: 42.2118, -71.114506

CMSA/MSA: Boston CMSA, Boston Metropolitan MSA

Parameters Measured: PM_{2.5} (hourly); NO, NO₂, NO_x, O₃

Year Established: 2002 as PAMS Type 1 site



Newburyport

Site Description: The Newburyport site is located on Plum Island and represents population exposure on an urban scale. It is a Type 3 PAMS site for Boston.

Address: 261 Northern Avenue, Newburyport

Lat./Lon.: 42.814444, -70.818333

CMSA/MSA: Boston CMSA, Boston Metropolitan MSA

Parameters Measured: NO, NO₂, NO_x, O₃, NO_t, VOCs, Meteorology

Year Established: 2010 as PAMS Type 3 site



Pittsfield – South Street

Site Description: The Pittsfield is located in a mixed commercial and residential area and represents population exposure on a neighborhood scale.

Address: 1 South Street, Pittsfield

Lat./Lon.: 42.452036, -73.255556

MSA/CMSA: Pittsfield MSA

Parameters Measured: PM_{2.5} hourly

Year Established: 2005 for population exposure monitoring



Pittsfield – Center Street

Site Description: The Pittsfield site is located in a mixed commercial and residential area and represents population exposure on a neighborhood scale.

Address: 78 Center Street, Pittsfield

Lat./Lon.: 42.448028, -73.254575

CMSA/MSA: Pittsfield MSA

Parameters Measured: PM_{2.5} (3-day)

Year Established: 1998 for population exposure monitoring



Truro

Site Description: The Truro site is located in a rural area adjacent to conservation land and represents population exposure and regional scale ozone transport.

Address: Fox bottom area, Truro

Lat./Lon.: 41.975833, -70.024167

CMSA/MSA: No MSA; Downwind Providence-Pawtucket, RI

Parameters Measured: O₃, Meteorology

Year Established: 1987 for population exposure monitoring



Uxbridge

Site Description: The Uxbridge site is located in a residential area adjacent to a park and represents population exposure and ozone transport monitoring on an urban scale.

Address: 366 East Hartford Avenue, Uxbridge

Lat./Lon.: 42.099722, -71.619917

CMSA/MSA: Boston CMSA, Worcester MSA

Parameters Measured: O₃, Meteorology

Year Established: 2008 for population exposure and ozone transport monitoring



Ware

Site Description: The Ware site is located at the Quabbin reservoir in a rural background location and represents population exposure on an urban scale. It is a PAMS Type 3 site for the Springfield area, and was originally as an Acid Rain site.

Address: Quabbin Summit, Ware

Lat./Lon.: 42.298514, -72.334575

CBSA/MSA: Springfield MSA

Parameters Measured: PM₁₀ (3 day); NO, NO₂, NO_x, SO₂, NO trace, O₃, VOCs, PM_{2.5} (hourly), Meteorology

Year Established: 1985 for population exposure monitoring



Worcester Airport

Site Description: The Worcester Airport site is located in a commercial area adjacent to an airport and represents population exposure on an urban scale.

Address: Airport Drive, Worcester

Lat./Lon.: 42.274342, -71.876022

CMSA/MSA: Boston CMSA, Worcester MSA

Parameters Measured: O₃, Meteorology

Year Established: 1979 for population exposure monitoring



Worcester YWCA

Site Description: The Worcester YWCA site is located in a mixed commercial and residential area and represents population exposure on a neighborhood scale.

Address: 2 Washington Street, Worcester

Lat./Lon.: 42.260125, -71.798889

CMSA/MSA: Boston CMSA, Worcester MSA

Parameters Measured: PM_{2.5} 3-day

Year Established: 2003 for population exposure monitoring



Worcester Summer Street

Site Description: The Worcester Summer Street site is located in an urban area adjacent to several major roadways and represents population exposure on a neighborhood scale.

Address: Summer Street, Worcester

Lat./Lon.: 42.263978, -71.794836

CMSA/MSA: Boston CMSA, Worcester MSA

Parameters Measured: PM_{2.5} (3 day); PM₁₀ (3 day) NO₂, SO₂, CO, PM_{2.5} (hourly), Radnet

Year Established: 2004 for population exposure monitoring

